



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1

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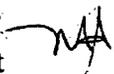
Superfund Records Center ~
SITE: NEW BEDFORD
BREAK: 3.7
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Memorandum

Date: August 4, 2011

Subject: New Bedford Harbor MassDEP Request to Include South Terminal in Enhancement – Proposed Mitigation Plan for Shellfish

To: Gary Davis, General Counsel
Executive Office of Energy and Environmental Affairs

From: Matt Schweisberg, Chief 
Wetlands Protection Unit

This memorandum provides EPA's response to the shellfish mitigation proposal included in MassDEP's proposed mitigation plan submitted to EPA on March 11, 2011 and further supplemented by a memorandum dated July 25, 2011 to Matt Schweisberg and Phil Colarusso of EPA from the Massachusetts Division of Marine Fisheries ("DMF memo"). This memorandum supplements EPA's prior comments provided to MassDEP in June of this year on the proposed compensatory mitigation plan. After reviewing all relevant documents, EPA will not accept a shellfish mitigation proposal that includes transplanting any shellfish from the inner harbor to any area below the hurricane barrier in New Bedford Harbor (Option No. 1 in the DMF memo). As set out more fully below, EPA will consider transplanting shellfish within areas inside the hurricane barrier or, if demonstrated that there is insufficient area for such transplanting, a combination of transplanting within the hurricane barrier and seeding below the barrier (Options 2 and 3 in the DMF memo).

EPA recognizes that the impacted shellfish are located in contaminated sediment and that state and federal prohibitions against harvesting and consumption of shellfish from the inner harbor are in place. At the same time, as a protected resource, EPA believes shellfish are an important part of the Harbor ecosystem and measures should be taken to preserve rather than destroy the over two million impacted shellfish to the extent practicable. Preservation ensures a continuation of diversity of species in the Harbor and Buzzards Bay. Quahogs and other shellfish filter large volumes of water, removing some contaminants during the course of their normal feeding. These filter feeders, when present in sufficient numbers, have the ability to control algal blooms that result from enrichment of our coastal waters from excess nutrients.



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For the reasons set out below, EPA will not accept a shellfish mitigation proposal that includes transplanting any shellfish from the inner harbor to any area below the hurricane barrier (Option 1 in the DMF memo):

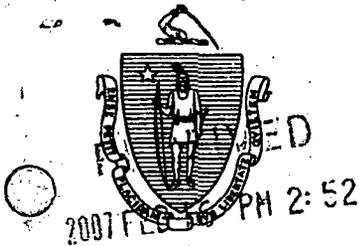
1. The New Bedford Harbor Superfund Site cleanup goal for PCBs in seafood is 0.02 ppm PCBs. This is a site specific risk-based concentration based on a cancer risk of 1×10^{-5} ¹ and a non-cancer hazard index of 1 which is applicable to recreationally caught seafood. The Food and Drug Administration (FDA) tolerance level of 2 ppm PCBs in fish tissue is applicable to commercial fishing, and reflects a market basket approach which assumes people eat a variety of fish from a variety of places, purchased at their local market. A PCB level of 2 ppm is not sufficient to protect people who regularly eat fish from New Bedford Harbor.
2. The site specific long-term seafood monitoring program, performed by MassDEP (with assistance from DMF in collecting and preparing annual seafood reports) on behalf of EPA, specifically shows that PCB depuration rates in shellfish appears to be very low and has sometimes shown that post-spawn PCB concentrations are higher than pre-spawn PCB levels in the same areas tested.
3. Massachusetts Department of Public Health (MADPH) and MassDEP, Bureau of Waste Site Cleanup, do not support transplanting shellfish outside of Area 1 (that is, above the hurricane barrier). See Attachment 1, letter dated February 15, 2007 from DPH to NOAA.
4. MADPH has promulgated a fishing ban that prohibits taking of shellfish from Area 1 (105 CMR 260.005). See attachment to Attachment A.
5. EPA's 1998 Record of Decision for the Superfund cleanup of New Bedford Harbor ("1998 ROD") (page 33) requires implementing institutional controls that prohibit the taking of seafood in Area 1 as well as providing seafood advisories for all areas of the Superfund Site (Areas I, II and III), posting no fishing signs and engaging in educational campaigns. See Attachment B for EPA's seafood advisories. They may also be found on EPA's website at: <http://www.epa.gov/nbh/seafood.html>. EPA and MADPH recently updated the warnings to reflect the most recent results of the long-term seafood monitoring program. It should also be noted that EPA's advisories reflect more stringent limitations on fish consumption than those contained in the state fishing ban.
6. Violation of EPA's institutional controls, required by the 1998 ROD, will jeopardize the protectiveness of the remedy.
7. EPA's five-year reviews (2005 and 2010) require ongoing institutional controls to ensure remedy protectiveness. The 2010 five year review requires that EPA fish consumption advisories be included in all shellfish and finfish licenses issued in New Bedford, Acushnet, Fairhaven and Dartmouth. It also requires that medical grand rounds be facilitated to inform the medical community of these dangers and ask that they pass information onto to patients.
8. The site educational outreach also includes an educational program that is now incorporated into the New Bedford school curriculum.

¹ The cancer risk of 1×10^{-5} was selected in the ROD be consistent with MADEP 21E program cancer risk; EPA's normal point of departure for human health of 1×10^{-6} .

EPA supports transplanting shellfish within the inner harbor (Option 2 in the DMF memo). EPA will also consider a mitigation proposal that includes both transplanting shellfish within the inner harbor and a seeding program (Options 2 and 3 in the DMF memo) only after MassDEP demonstrates, through field investigation work, that there is insufficient suitable habitat in the inner harbor for this amount of shellfish. If EPA agrees that only a portion of the affected shellfish can be safely transplanted within the inner harbor, it will work with MassDEP to create a sound seeding program as mitigation for the remainder of the impacted shellfish.

If you have any questions, please contact me at 617-918-1628 or Elaine Stanley at 617-918-1332.

cc: Kathryn Ford, Mike Hickey, Tom Shields, MassDMF
Jay Borkland, Chet Myers, Apex
Carl Dierker, Jim Owens, Phil Colarusso, Elaine Stanley, EPA



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Office of the General Counsel
Second Floor (617) 624-5220

February 15, 2007

Mr. Jack Terrill
New Bedford Harbor NRD Trustee Coordinator
NOAA - New England Region Management Division
One Blackburn Drive
Gloucester, MA 01930

Dear Mr. Terrill:

The Massachusetts Department of Public Health (MDPH), Center for Environmental Health (CEH), in coordination with the Massachusetts Department of Environmental Protection (MDEP), has been asked to review the 2005 Shellfish Restoration Statement of Work and Budget prepared by the Regional Shellfish Restoration Committee on behalf of the Towns of Dartmouth and Fairhaven and the City of New Bedford. The proposed regional shellfish restoration work in New Bedford Harbor has been submitted to the New Bedford Harbor Trustee Council.

CEH staff, in consultation with the MDPH Office of General Counsel, has reviewed the proposed restoration work to determine whether the proposed restoration project might pose an unacceptable risk to public health and whether it might conflict with MDPH regulations governing the taking of fish and shellfish in New Bedford Harbor. Based upon this review and for the following reasons, MDPH does have concerns about certain parts of this restoration project.

Among the many goals of the New Bedford Area Shellfish Restoration Project, the proposal that concerns MDPH the most is the plan to relocate shellfish from Area I to Area II. These areas are defined in Section 260.005(4) of the MDPH regulations entitled *Prohibition Against Certain Fishing in New Bedford Harbor* (105 CMR 260.000). A copy of these regulations is attached.

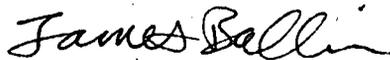
These regulations impose restrictions on the taking of fish and/or shellfish in each of the three areas of New Bedford Harbor. This restoration project is subject to these regulatory

restrictions. Specifically, 105 CMR 260.005(1) prohibits any taking or selling of any fish (except bait fish), lobster or shellfish from Area I. The MDPH Food Protection Program considers a "taking" to be any capturing or harvesting of fish or shellfish, even for the purpose of relocating. Therefore, the relocation of shellfish from Area I to Area II would violate these regulatory restrictions.

In addition to concerns about the restoration plan violating MDPH regulations, CEH believes that the findings of the Greater New Bedford Health Effects Study (GNBHES), released in 1987, clearly demonstrated a relationship between consumption of fish caught from the closure areas and higher serum PCB levels. In New Bedford, approximately 50 percent of fish eaters who ate fish from closed areas of the harbor had serum PCB levels in the range of 9-15.5 parts per billion (ppb) compared to mean prevalence estimates in the general population of approximately 6 ppb. Since the time of our study (1984-1987), research indicates that health effects are of concern at even lower serum PCB levels (e.g., in the 2-6 ppb range) than what was known in the mid-1980s, thereby supporting great caution with respect to harvesting fish or shellfish from the closure areas.

We appreciate the opportunity to comment on this New Bedford Harbor Restoration Plan. If you have any questions regarding this letter, please contact me at 617-624-5220.

Sincerely,



James Ballin
Deputy General Counsel

Enclosure: 105 CMR 260.000

Cc: Suzanne Condon, Associate Commissioner, MDPH-CEH
Martha Steele, Deputy Director, MDPH-CEH

105 CMR 260.000: PROHIBITION AGAINST CERTAIN FISHING IN NEW BEDFORD HARBOR

Section

- 260.001: Findings and Purpose
 260.002: Emergency Promulgation
 260.003: Authority
 260.004: Adulterated Fish
 260.005: Taking and/or Sale of Lobsters, and Certain Fish Prohibited

260.001: Findings and Purpose

The chemical substances known as polychlorinated biphenyls (PCBs) have been discharged into the Acushnet River and are present in that river and in the New Bedford Harbor. Laboratory analyses of lobster and bottom-feeding fish caught in this area have revealed that PCBs are present in these food sources in levels that exceed the current maximum allowable levels (or "temporary tolerance") established by the Federal Food and Drug Administration under the Food and Drug Cosmetic Act, 21 U.S.C. 301, § 346. Consumption of PCBs causes diseases deemed dangerous to the public health, namely PCB intoxication and carcinogenesis. 105 CMR 260.000 are promulgated to prevent and control the incidence of such diseases among members of the general public, and to prevent the sale of adulterated food to the public.

260.002: Emergency Promulgation

PCBs settle to the floor of the body of water into which they are discharged; they may remain there for decades. Because lobsters and certain fish are bottom-feeders, they take in PCBs which remain in their bodies in unacceptably high concentrations. These food sources are currently being taken from contaminated areas (as described in 105 CMR 260.005) for primarily recreational and other noncommercial purposes and are being consumed by the public. Consumption of these food sources by humans poses an immediate and lasting threat to health. Further public consumption of these overly-contaminated food sources must be avoided by immediately preventing the taking, sale, and thereby the eating of such food sources caught in the contaminated area. Immediate adoption of 105 CMR 260.000 is necessary for the preservation of the public health; observance of the requirements of notice and public hearing, generally required under the first paragraph of M.G.L. c. 30A, § 2 prior to the promulgation of regulations, would be, in this situation, contrary to the public interest.

260.003: Authority

105 CMR 260.000 is promulgated under authority of M.G.L. c. 111, § 5 and 6, M.G.L. c. 94, § 186 and 192, M.G.L. c. 30A, § 2.

260.004: Adulterated Fish

Fish, containing levels of PCBs exceeding the maximum allowable level (or "temporary tolerance") of PCBs established by the Federal Food and Drug Administration for the edible portion of such food sources are adulterated within the meaning of M.G.L. c. 94, § 186, first paragraph under food. Such food sources caught in the contaminated area are presumed to be contaminated.

260.005: Taking and/or Sale of Lobsters and Certain Fish Prohibited

- (1) No person shall take and/or sell any fish (except bait fish), lobster or shellfish from the area of New Bedford Harbor (Area I) described below:

The waters north of the Hurricane Dyke in New Bedford Harbor.

260.005: continued

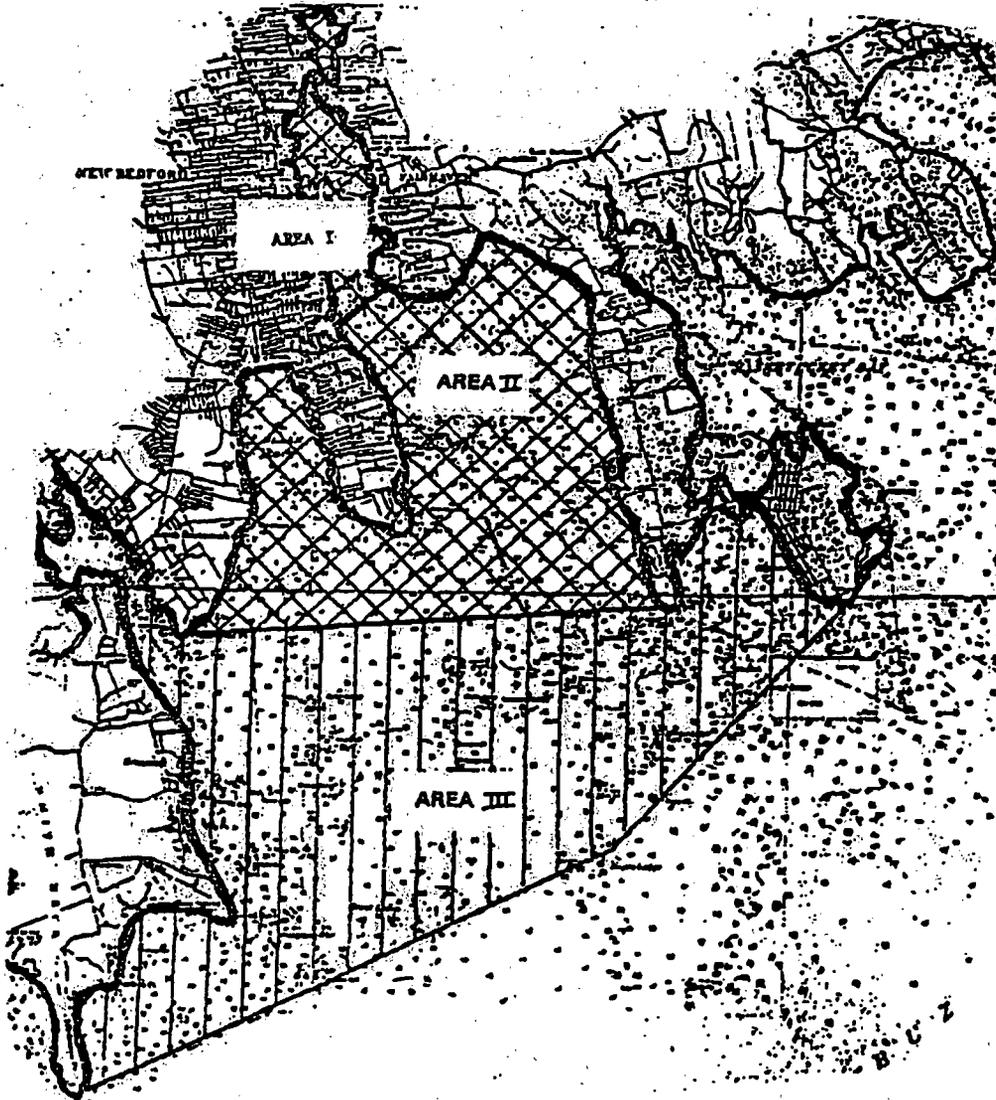
(2) No person shall take and/or sell any lobster or bottom feeding fish (including eels, scup, flounder and tautog) from the area of New Bedford Harbor (Area II) described in 105 CMR 260.005(4):

The waters generally south of area I and north of a line extending from Ricketson's Point in South Dartmouth westerly to Wilbur Point on Sconticut Neck.

(3) No person shall take and/or sell lobsters from the area of New Bedford Harbor (Area III) described in 105 CMR 260.005(4):

The waters generally south of area II and north of a line extending from Mishaum Point on Smith Neck in the town of Dartmouth north and west to Gong "3" on Hursett Rock off New Bedford Harbor and continuous north and west to Rocky Point on West Island in the town of Fairhaven.

(4) Map of New Bedford Harbor Outlining Areas I, II and III



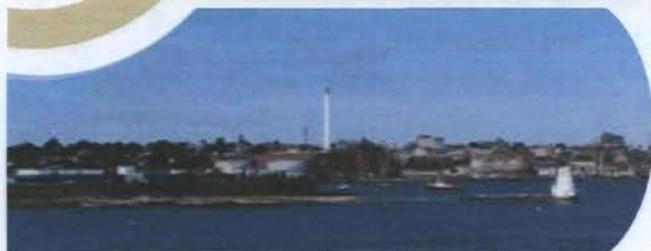
REGULATORY AUTHORITY

105 CMR 260.000: M.G.L. c. 30A, § 2; M.G.L. c. 111, §§ 5 and 6; M.G.L. c. 94, § 186 and 192.

SUPERFUND

New Bedford Harbor New Bedford, MA

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND



THE SUPERFUND PROGRAM protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.

SITE DESCRIPTION:

The U.S. EPA has been committed to the New Bedford Harbor (NBH) cleanup since the 1980s, following discovery of polychlorinated biphenyls (PCBs) in sediment and fish and designation to the national priority list of Superfund sites in 1983. In 1998, EPA proposed a dredging remedy for the Upper and Lower harbors, and full scale dredging started in 2004. Remediation is ongoing, with dredging typically occurring in the summer. In 2009, EPA Administrator Lisa Jackson announced the availability of recovery act funds to help speed up the current cleanup timeframe for the harbor cleanup.

PARTNERING

As part of the NBH site monitoring, the Massachusetts Department of Environmental Protection has conducted annual fish and shellfish sampling to determine whether PCB concentrations in NBH fish and shellfish are declining as a result of cleanup activities. In general, PCB concentrations have indeed decreased from the 1980s to the present in most species, although concerns remain as discussed herein. Fish and shellfish sampling will continue throughout the cleanup efforts, and updates to this fact sheet will be issued as appropriate.

ASSESSMENT

The Massachusetts Department of Public Health (MDPH) has also had extensive involvement with NBH in order to address a variety of health concerns. In 1979, MDPH promulgated state regulations prohibiting the consumption of any fish/shellfish in Area 1 of NBH; of bottom feeding fish (eel, scup, flounder, and tautog) or lobster in Area 2; and lobster in Area 3 (see attached map). These early efforts were followed by human epidemiological studies of PCB exposure via fish consumption by MDPH and others. MDPH has additional advice for sensitive populations (pregnant women, nursing mothers, children under age 12, women who may become pregnant) that

can be found at www.mass.gov/dph/fishadvisories. EPA supports this additional advice, and notes that its updated risk assessment (discussed below) recommends that sensitive populations avoid fish, shellfish and lobster from the three closure areas in NBH (see map on reverse) except that shellfish from Area 3 and Clark's cove may safely be consumed by these sensitive populations if limited to one meal per month.

RECOMMENDATIONS

As part of the Superfund process, EPA is required to conduct risk assessments that will result in cleanup levels that the selected remedy for a given site must meet. These risk assessments use conservative (health-protective) assumptions to ensure that even sensitive populations will not have health concerns following completion of remediation activities. In the case of NBH and the risk assessment conducted on fish/shellfish in the closed areas of the harbor, EPA's updated evaluation indicates that some species not currently covered by the 1979 state regulations may present health concerns for recreational fishermen and shell fishermen (and/or their families/friends who consume their take) if these species are consumed in larger quantities than current epidemiological data

continued on next page >

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LEARN MORE AT:
www.epa.gov/nbh

Original Fishing Ban (in effect 1979–present)
per Massachusetts Department of Public Health



Updated 2010 EPA Recommendations for Recreational Fishermen/Shellfishermen
per Superfund Risk Assessment with additional species highlighted*
*sensitive populations—see reverse for more information



Do NOT eat shellfish
No coma mariscos
Não coma mariscos



Do NOT eat fish
No coma pescado
Não coma peixe



Do NOT eat lobster
No coma langosta
Não coma lagosta



Do NOT eat bottom feeding fish:
No coma pescado de fundo:
Não coma peixe de fundo:

- flounder
- linguado
- solha
- tautog
- tautoga
- bodião da ostra
- scup
- sargo
- sargo
- eel
- anguila
- anguila

continued from front >> suggest. EPA believes it is important that recreational fishermen and shellfishermen be aware that the risk assessment suggests that: consumption of black sea bass be limited to one meal per month if they are obtained in Areas 2 and 3; that scup not be consumed from Areas 2 or 3; and that general guidelines for shellfish include limiting consumption to one meal a month in Area 2 (one meal per week in Clark's Cove). See map above for a summary of EPA's recommendations.

It is important to recognize the substantial benefits of fish consumption for everyone. Fish is one of the best sources of fatty acids which are helpful in reducing the risk of heart disease. In order to avoid exposure to a harmful level of contaminants, people should choose a variety of fish and shellfish from a variety of sources.

